

# Work Order ID 112021

\*112021\*

Page 1

Tuesday, January 28, 2014 1:39:01 PM

Item ID: D4920-3 Accept \*N9000040100\* Setup Start \*NS1\*  
 Revision ID: Stop \*NS2\*  
 Item Name: End Fitting  
 Start Date: 1/28/2014 Start Qty: 3.00 \*3\* Cust Item ID:  
 Required Date: 2/14/2014 Req'd Qty: 3.00 \*3\* Customer:  
 Reference:

Approvals: Process Plan: mmf Date: 14-1-28 Tooling: Date: Run Start \*NR1\*  
 QC: Date: SPC (Y/N): Date: Stop \*NR2\*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D4920									
100		0.00							
*100*									
Outsource5	Memo	0.00							
Outsource process - Machining	ISSUE P/O: <u>22238</u>								
	POSSIBLE SUPPLIER:ATG								
	C OF C IS REQUIRED								
110	QC6- Inspect dimensions to drawing	0.00							
*110*									
QC	Memo	0.00							
Quality Control									
150	PURCHASING	0.00							
*150*									
Purchasing	Memo	0.00							
Purchasing	Issue P/O: <u>23509</u>								
	LPI Per ASTM 1417 LEVEL 2								
	Certificate of conformaty is required								

mmf 14/1/30

D 3x SP 14-3-24

3

CY 14/03/25 3

DQA: \_\_\_\_\_ Date: \_\_\_\_\_

## WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order update only ☐

Work Order: _____  Part No. _____  NCR No. _____	<b>DISPOSITION</b>  Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Suspected Unapproved <input type="checkbox"/>	<b>AGAINST DEPARTMENT/PROCESS</b>  <table style="width: 100%;"> <tr> <td>Skid-tube <input type="checkbox"/></td> <td>Crosstube <input type="checkbox"/></td> <td>Water Jet <input type="checkbox"/></td> <td>Engineering <input type="checkbox"/></td> </tr> <tr> <td>Machining <input type="checkbox"/></td> <td>Small Fab <input type="checkbox"/></td> <td>Prod. Eng. Coord. <input type="checkbox"/></td> <td>Quality <input type="checkbox"/></td> </tr> <tr> <td>Thermoforming <input type="checkbox"/></td> <td>Finishing <input type="checkbox"/></td> <td>Rec/Store/Packaging <input type="checkbox"/></td> <td>Other <input type="checkbox"/></td> </tr> <tr> <td>Large Fab <input type="checkbox"/></td> <td>Composite <input type="checkbox"/></td> <td>Supplier <input type="checkbox"/></td> <td></td> </tr> </table>	Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>	Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>	
Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>															
Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>															
Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>															
Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>																

Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design									
Doc/Data									
Equip/Tooling									
Handling/Pre									
Material									
Operator									
Offset/Setup									
Process									
Supplier									
Training									
Transport									
Unapproved									

### FAULT CATEGORY

<b>Landing Gear</b> <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric <input type="checkbox"/> Cracks <input type="checkbox"/> Crimp/Kink/Ripple/Wave <input type="checkbox"/> Cuffs <input type="checkbox"/> Crushing <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Marks/Chatter <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube	<b>General</b> <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damage/Defect <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drawing <input type="checkbox"/> Drill Holes <input type="checkbox"/> Finish <input type="checkbox"/> Fit/Function	<input type="checkbox"/> Folio/Program <input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete/Unqualified <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Misaligned/off center <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Off-set <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence
<input type="checkbox"/> Outside Dimensions <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge		
<input type="checkbox"/> Pressure/Forced Set-up <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled <input type="checkbox"/> Other		

**Work Order ID 112021****\*112021\***

Page 2

Tuesday, January 28, 2014 1:39:01 PM

Item ID: D4920-3

Accept

**\*N900040100\***Setup Start **\*NS1\***

Revision ID:

Stop **\*NS2\***

Item Name: End Fitting

Start Date: 1/28/2014 Start Qty: 3.00

**\*3\***

Cust Item ID:

Required Date: 2/14/2014 Req'd Qty: 3.00

**\*3\***

Customer:

Reference:

Approvals:

Process Plan: \_\_\_\_\_

Date: \_\_\_\_\_

Tooling: \_\_\_\_\_

Date: \_\_\_\_\_

Run Start **\*NR1\***

QC: \_\_\_\_\_

Date: \_\_\_\_\_

SPC (Y/N): \_\_\_\_\_

Date: \_\_\_\_\_

Stop **\*NR2\***Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run Hours

Tool ID

Tool #

Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

160

Receive &amp; Inspect for Damage &amp; Mat'l Certs ✓

0.00

**\*160\***

Packaging

Memo

0.00

Packaging

Ensure certificate of conformity is attached ✓

CY 1/103/25 3

190

QC21- Final Inspection - Work Order Release

0.00

**\*190\***

QC

Memo

0.00

Quality Control

1/14-03-25

1/14-03-25

DQA: \_\_\_\_\_ Date: \_\_\_\_\_



## WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order update only ☐

Work Order: _____  Part No. _____  NCR No. _____	<b>DISPOSITION</b>  Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Suspected Unapproved <input type="checkbox"/>	<b>AGAINST DEPARTMENT/PROCESS</b>  <table style="width: 100%;"> <tr> <td>Skid-tube <input type="checkbox"/></td> <td>Crosstube <input type="checkbox"/></td> <td>Water Jet <input type="checkbox"/></td> <td>Engineering <input type="checkbox"/></td> </tr> <tr> <td>Machining <input type="checkbox"/></td> <td>Small Fab <input type="checkbox"/></td> <td>Prod. Eng. Coord. <input type="checkbox"/></td> <td>Quality <input type="checkbox"/></td> </tr> <tr> <td>Thermoforming <input type="checkbox"/></td> <td>Finishing <input type="checkbox"/></td> <td>Rec/Store/Packaging <input type="checkbox"/></td> <td>Other <input type="checkbox"/></td> </tr> <tr> <td>Large Fab <input type="checkbox"/></td> <td>Composite <input type="checkbox"/></td> <td>Supplier <input type="checkbox"/></td> <td></td> </tr> </table>	Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>	Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>	
Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>															
Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>															
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Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
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Equip/Tooling									
Handling/Pre									
Material									
Operator									
Offset/Setup									
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Supplier									
Training									
Transport									
Unapproved									

### FAULT CATEGORY

<b>Landing Gear</b> <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric <input type="checkbox"/> Cracks <input type="checkbox"/> Crimp/Kink/Ripple/Wave <input type="checkbox"/> Cuffs <input type="checkbox"/> Crushing <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Marks/Chatter <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube	<b>General</b> <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damage/Defect <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drawing <input type="checkbox"/> Drill Holes <input type="checkbox"/> Finish <input type="checkbox"/> Fit/Function	<input type="checkbox"/> Folio/Program <input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete/Unqualified <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Misaligned/off center <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Off-set <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence	<input type="checkbox"/> Outside Dimensions <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge  <input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Set-up <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled <input type="checkbox"/> Other
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# Picklist Print

Tuesday, January 28, 2014 1:39:00 PM

Page 1

Work Order ID: 112021

Parent Item: D4920-3

Parent Item Name: End Fitting

Comments: IPP REV:A NEW ISSUE JLM 14-01-28 VERIFIED BY:JFS

Start Date: 1/28/2014

Required Date: 2/14/2014

Start Qty: 3.00

Required Qty: 3.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
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D4920-3P		Purchased	No				Each	0.0000					
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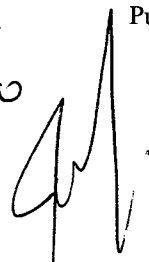
End Fitting

M174PH-H900R1.375

17-4 SS H900 ROUND BAR 1.375

		Purchased	No				f	90.0000					
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1.50



Location

MAT031

111123

121280

m126952

Loc Qty

90

12

27

51

Loc Code

3x<sup>3</sup> SP 14-3-24

2 CL 14/01/30

2

m127334

DQA: \_\_\_\_\_ Date: \_\_\_\_\_



## WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

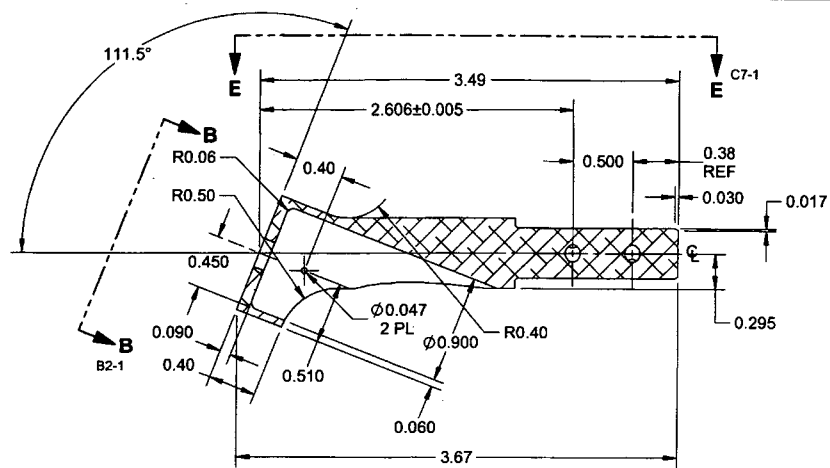
Work Order update only ☐

Work Order: _____  Part No. _____  NCR No. _____	<b>DISPOSITION</b>  Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Suspected Unapproved <input type="checkbox"/>	<b>AGAINST DEPARTMENT/PROCESS</b>  <table style="width: 100%;"> <tr> <td style="width: 33%;">           Skid-tube <input type="checkbox"/>            Machining <input type="checkbox"/>            Thermoforming <input type="checkbox"/>            Large Fab <input type="checkbox"/> </td> <td style="width: 33%;">           Crosstube <input type="checkbox"/>            Small Fab <input type="checkbox"/>            Finishing <input type="checkbox"/>            Composite <input type="checkbox"/> </td> <td style="width: 33%;">           Water Jet <input type="checkbox"/>            Prod. Eng. Coord. <input type="checkbox"/>            Rec/Store/Packaging <input type="checkbox"/>            Supplier <input type="checkbox"/> </td> <td style="width: 33%;">           Engineering <input type="checkbox"/>            Quality <input type="checkbox"/>            Other <input type="checkbox"/> </td> </tr> </table>	Skid-tube <input type="checkbox"/> Machining <input type="checkbox"/> Thermoforming <input type="checkbox"/> Large Fab <input type="checkbox"/>	Crosstube <input type="checkbox"/> Small Fab <input type="checkbox"/> Finishing <input type="checkbox"/> Composite <input type="checkbox"/>	Water Jet <input type="checkbox"/> Prod. Eng. Coord. <input type="checkbox"/> Rec/Store/Packaging <input type="checkbox"/> Supplier <input type="checkbox"/>	Engineering <input type="checkbox"/> Quality <input type="checkbox"/> Other <input type="checkbox"/>
Skid-tube <input type="checkbox"/> Machining <input type="checkbox"/> Thermoforming <input type="checkbox"/> Large Fab <input type="checkbox"/>	Crosstube <input type="checkbox"/> Small Fab <input type="checkbox"/> Finishing <input type="checkbox"/> Composite <input type="checkbox"/>	Water Jet <input type="checkbox"/> Prod. Eng. Coord. <input type="checkbox"/> Rec/Store/Packaging <input type="checkbox"/> Supplier <input type="checkbox"/>	Engineering <input type="checkbox"/> Quality <input type="checkbox"/> Other <input type="checkbox"/>			

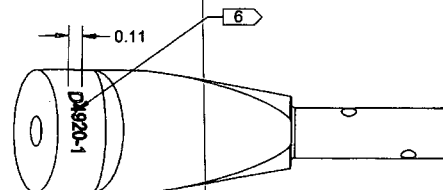
Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design									
Doc/Data									
Equip/Tooling									
Handling/Pre									
Material									
Operator									
Offset/Setup									
Process									
Supplier									
Training									
Transport									
Unapproved									

### FAULT CATEGORY

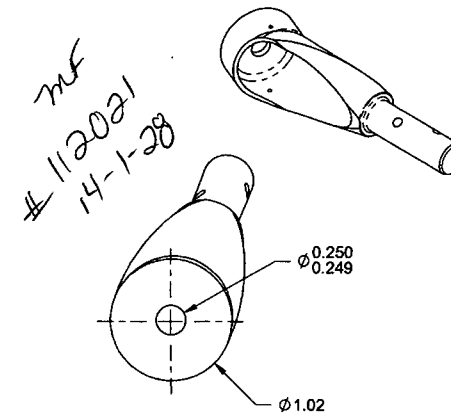
<b>Landing Gear</b> <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric <input type="checkbox"/> Cracks <input type="checkbox"/> Crimp/Kink/Ripple/Wave <input type="checkbox"/> Cuffs <input type="checkbox"/> Crushing <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Marks/Chatter <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube	<b>General</b> <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damage/Defect <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drawing <input type="checkbox"/> Drill Holes <input type="checkbox"/> Finish <input type="checkbox"/> Fit/Function	<input type="checkbox"/> Folio/Program <input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete/Unqualified <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Misaligned/off center <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Off-set <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence	<input type="checkbox"/> Outside Dimensions <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge  <input type="checkbox"/> Pressure/Forced Set-up <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled <input type="checkbox"/> Other
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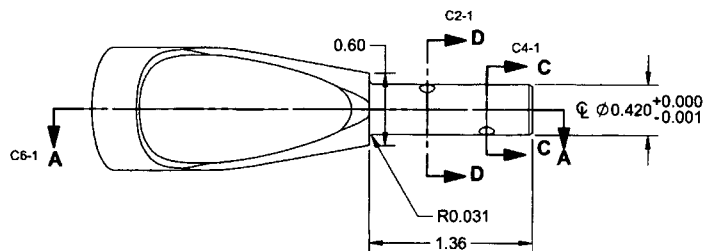
**SECTION A-A** B5-1



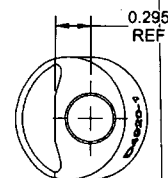
**AUXILIARY VIEW E-E** C7-1



**AUXILIARY VIEW B-B** C7-1



**SECTION C-C** C5-1



**SECTION D-D** C5-1

**D4920-1 END FITTING**

**NOTES:**

- 1) MATERIAL: 17-4 PH/S17400/TYPE 630 SS ROUND BAR, H900 CONDITION  
PER AMS 5643/ASTM A564  
DART SPEC M17-4-R
- 2) FINISH: N/A
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY PER QSI 044 6.3.  
ENGRAVE P/N USING 0.11 HIGH LETTERS TO A MAX. DEPTH OF 0.010
- 7) WEIGHT: 0.21 lbs
- 8) LIQUID PENETRANT INSPECT PER QSI 038 6.1.1 (ASTM E1417 LEVEL 2)

APPROVED	A	NEW ISSUE		RF	13.09.16
	REV.	DESCRIPTION		BY	DATE
	DESIGN	RF	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA		
	DRAWN	RF			
	CHECKED	HS	DRAWING NO.	REV. /	
	MFG. APPR.	JLM	D4920	SHEET 1 OF	
	APPROVED	HS	TITLE	SCALE	
	DE APPR.	DS	END FITTING	NT	
	DATE	13.12.15	COPYRIGHT © 2013 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.		

DQA: \_\_\_\_\_ Date: \_\_\_\_\_



## WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order update only ☐

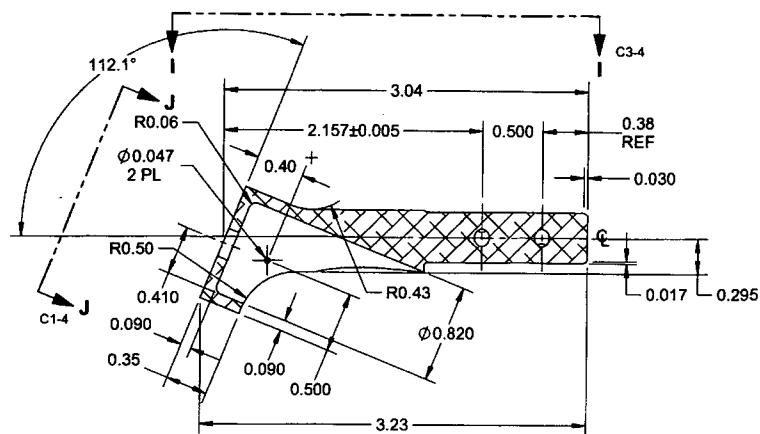
Work Order: _____  Part No. _____  NCR No. _____	<b>DISPOSITION</b>  Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Suspected Unapproved <input type="checkbox"/>	<b>AGAINST DEPARTMENT/PROCESS</b>  <table style="width: 100%;"> <tr> <td style="width: 33%;">           Skid-tube <input type="checkbox"/>            Machining <input type="checkbox"/>            Thermoforming <input type="checkbox"/>            Large Fab <input type="checkbox"/> </td> <td style="width: 33%;">           Crosstube <input type="checkbox"/>            Small Fab <input type="checkbox"/>            Finishing <input type="checkbox"/>            Composite <input type="checkbox"/> </td> <td style="width: 33%;">           Water Jet <input type="checkbox"/>            Prod. Eng. Coord. <input type="checkbox"/>            Rec/Store/Packaging <input type="checkbox"/>            Supplier <input type="checkbox"/> </td> <td style="width: 33%;">           Engineering <input type="checkbox"/>            Quality <input type="checkbox"/>            Other <input type="checkbox"/> </td> </tr> </table>	Skid-tube <input type="checkbox"/> Machining <input type="checkbox"/> Thermoforming <input type="checkbox"/> Large Fab <input type="checkbox"/>	Crosstube <input type="checkbox"/> Small Fab <input type="checkbox"/> Finishing <input type="checkbox"/> Composite <input type="checkbox"/>	Water Jet <input type="checkbox"/> Prod. Eng. Coord. <input type="checkbox"/> Rec/Store/Packaging <input type="checkbox"/> Supplier <input type="checkbox"/>	Engineering <input type="checkbox"/> Quality <input type="checkbox"/> Other <input type="checkbox"/>
Skid-tube <input type="checkbox"/> Machining <input type="checkbox"/> Thermoforming <input type="checkbox"/> Large Fab <input type="checkbox"/>	Crosstube <input type="checkbox"/> Small Fab <input type="checkbox"/> Finishing <input type="checkbox"/> Composite <input type="checkbox"/>	Water Jet <input type="checkbox"/> Prod. Eng. Coord. <input type="checkbox"/> Rec/Store/Packaging <input type="checkbox"/> Supplier <input type="checkbox"/>	Engineering <input type="checkbox"/> Quality <input type="checkbox"/> Other <input type="checkbox"/>			

Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
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Doc/Data									
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Offset/Setup									
Process									
Supplier									
Training									
Transport									
Unapproved									

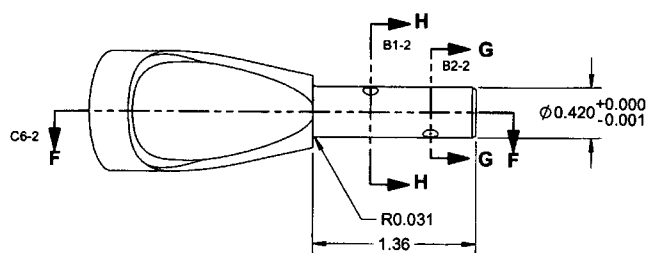
### FAULT CATEGORY

<b>Landing Gear</b> <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric <input type="checkbox"/> Cracks <input type="checkbox"/> Crimp/Kink/Ripple/Wave <input type="checkbox"/> Cuffs <input type="checkbox"/> Crushing <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Marks/Chatter <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube	<b>General</b> <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damage/Defect <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drawing <input type="checkbox"/> Drill Holes <input type="checkbox"/> Finish <input type="checkbox"/> Fit/Function	<input type="checkbox"/> Folio/Program <input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete/Unqualified <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Misaligned/off center <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Off-set <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence	<input type="checkbox"/> Outside Dimensions <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge  <input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Set-up <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled <input type="checkbox"/> Other
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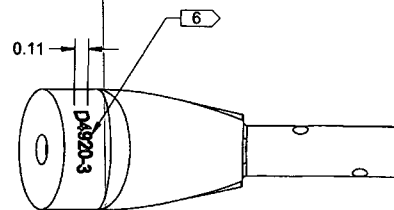




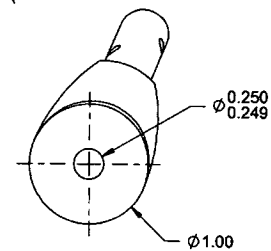
**SECTION F-F B7-2**



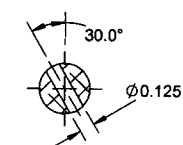
**D4920-3 END FITTING**



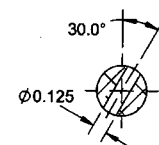
**AUXILIARY VIEW I-I D5-2**



**VIEW J-J D7-2**



**SECTION G-G B5-2**



**SECTION H-H B6-2**

**NOTES:**

- 1) MATERIAL: 17-4 PH/S17400/TYPE 630 SS ROUND BAR, H900 CONDITION  
PER AMS 5643/ASTM A564  
DART SPEC M17-4-R
- 2) FINISH: N/A
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- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY PER QSI 044 6.3.  
ENGRAVE P/N USING 0.11 HIGH LETTERS TO A MAX. DEPTH OF 0.010
- 7) WEIGHT: 0.17 lbs
- 8) LIQUID PENETRANT INSPECT PER QSI 038 6.1.1 (ASTM E1417 LEVEL 2)

APPROVED

DESIGN	RF	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA	
DRAWN	RF		
CHECKED	HS	DRAWING NO.	REV. A
MFG. APPR.	JLM	<b>D4920</b>	SHEET 2 OF 2
APPROVED	HS	TITLE	SCALE
DE APPR.	DS	<b>END FITTING</b>	NTS
DATE	13.12.15	<small>COPYRIGHT © 2013 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.</small>	

DQA: \_\_\_\_\_ Date: \_\_\_\_\_



## WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order update only ☐

Work Order: _____  Part No. _____  NCR No. _____	<b>DISPOSITION</b>  Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Suspected Unapproved <input type="checkbox"/>	<b>AGAINST DEPARTMENT/PROCESS</b>  <table style="width: 100%;"> <tr> <td>Skid-tube <input type="checkbox"/></td> <td>Crosstube <input type="checkbox"/></td> <td>Water Jet <input type="checkbox"/></td> <td>Engineering <input type="checkbox"/></td> </tr> <tr> <td>Machining <input type="checkbox"/></td> <td>Small Fab <input type="checkbox"/></td> <td>Prod. Eng. Coord. <input type="checkbox"/></td> <td>Quality <input type="checkbox"/></td> </tr> <tr> <td>Thermoforming <input type="checkbox"/></td> <td>Finishing <input type="checkbox"/></td> <td>Rec/Store/Packaging <input type="checkbox"/></td> <td>Other <input type="checkbox"/></td> </tr> <tr> <td>Large Fab <input type="checkbox"/></td> <td>Composite <input type="checkbox"/></td> <td>Supplier <input type="checkbox"/></td> <td></td> </tr> </table>	Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>	Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>	
Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>															
Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>															
Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>															
Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>																

Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design									
Doc/Data									
Equip/Tooling									
Handling/Pre									
Material									
Operator									
Offset/Setup									
Process									
Supplier									
Training									
Transport									
Unapproved									

### FAULT CATEGORY

<b>Landing Gear</b> <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric <input type="checkbox"/> Cracks <input type="checkbox"/> Crimp/Kink/Ripple/Wave <input type="checkbox"/> Cuffs <input type="checkbox"/> Crushing <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Marks/Chatter <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube	<b>General</b> <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damage/Defect <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drawing <input type="checkbox"/> Drill Holes <input type="checkbox"/> Finish <input type="checkbox"/> Fit/Function	<input type="checkbox"/> Folio/Program <input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete/Unqualified <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Misaligned/off center <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Off-set <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence	<input type="checkbox"/> Outside Dimensions <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge <input type="checkbox"/> Pressure/Forced Set-up <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled <input type="checkbox"/> Other
--	--	---	--



A.T.G. INDUSTRIES INC.  
731 INDUSTRIELLE STREET  
ROCKLAND, ON K4K 1T2  
Canada

Ph: (613) 446-4544  
Fax: (613) 446-4556

### Pack List

Number: 907604

Date: 22-Mar-14

To

DART AEROSPACE LTD  
1270 ABERDEEN STREET  
HAWKESBURY, ON K6A 1K7  
Canada

Ship To

Michael Gregoire  
DART AEROSPACE LTD  
1270 ABERDEEN STREET  
HAWKESBURY, ON K6A 1K7  
Canada

Ph: 613 632-9577

Fax: 613 632-1053

Ph: 613 632-9577

Fax: 613 632-1053

Terms		Ship Via	
Quantity	Description		
	PLEASE REFERENCE THE PACK LIST NUMBER ON ALL CORRESPONDENCE TO THIS SHIPMENT. IF YOU HAVE ANY QUESTIONS, PLEASE CALL AT (613) 446-4544.		
2 ea	Part: D4920-1P END FITTING Job: 15722 PARTS HAS NO NDT CERTIFICATION AS PER EMAIL FROM DART	Rev: A ✓ PO: PO22838 Line: 19	
3 ea	Part: D4920-3P END FITTING Job: 15723 PARTS HAS NO NDT CERTIFICATION AS PER EMAIL FROM DART	Rev: A ✓ PO: PO22838 Line: 20	SP 14-3-24
DATE: 22/03/2014 CERTIFIED SIGNATURE: RECEIVER SIGNATURE: CERTIFICATE OF CONFORMANCE A.T.G. INDUSTRIES INC. CERTIFIES THAT ALL ITEMS IN THIS SHIPMENT ARE IN CONFORMANCE WITH THE REQUIREMENTS, SPECIFICATIONS, AND DRAWINGS REFERENCED IN THE ABOVE PURCHASE ORDER. I.S.O. 9001 : 2008 REGISTERED / MADE IN CANADA			

3/22/2014

RE: Eng Mounr end fittings PO22838

Hi Pat,

As discussed, we will take care of the ndt for the D4920-1/3, I will pick up the parts on Friday.

Keep me posted,

JL

---

**From:** Patrick Page [mailto:pagep@atgindustries.com]

**Sent:** March-17-14 10:23 AM

**To:** Jean-Luc Menard

**Subject:** RE: Eng Mounr end fittings PO22838

Jean-Luc,

It was on our side the we ad trouble with our emails.

4920 will go on the machine on Wednesday and will have to go to Sky service next monday

Thank you

---

**Pat Pagé**

Shop Foreman

A.T.G. Industries Inc.

(TEL) 613-446-4544 • (FAX) 613-446-4556

E-mail: pagep@atgindustries.com

Website: [www.atgindustries.com](http://www.atgindustries.com)

---

**From:** Jean-Luc Menard [jmenard@artaero.com]

**Sent:** Monday, March 17, 2014 8:48 AM

**To:** Patrick Page

**Subject:** RE: Eng Mounr end fittings PO22838

---

Good morning Pat,

I am resending this to you as something happened on Friday with the e-mail and I don't know if it was on our end or yours.

Pls see below,

Thx

JL

---

**From:** Jean-Luc Menard

**Sent:** March-14-14 3:02 PM

**To:** 'Patrick Page'

**Subject:** RE: Eng Mounr end fittings PO22838

Hi Pat,

Any news on the d4920's?

Thx

JL

---

**From:** Patrick Page [mailto:pagep@atgindustries.com]

**Sent:** March-12-14 5:13 PM

**To:** Jean-Luc Menard





Dart Aerospace Ltd.  
1270 Aberdeen Street  
Hawkesbury, ON K6A 1K7  
Tel: 613 632 9577  
Fax: 613 632 1053

## PURCHASE ORDER

Purchase Order ID PO22838

Purchase Order Date 1/30/2014

PO Print Date 1/30/2014

Page Number 8 of 8

Order From :

A.T.G. INDUSTRIES INC.  
731 INDUSTRIELLE ROAD  
ROCKLAND, ON K4K 1T2  
CANADA

VC-ATG001

Ship To : DART AEROSPACE LTD

1270 ABERDEEN  
HAWKESBURY, ON K6A 1K7  
CANADA

Contact Name

Vendor Phone 613-446-4544

Ship To Contact

Ship To Phone

Ship Via: VENDOR'S TRUCK

Ship Acct:

Buyer

Michael Gregoire

Customer POID

Customer Tax #

10127-2607

Terms

Net 30

Currency

CAD

FOB

FCA - (Free Carrier)

19 D4920-1P

End Fitting

3/7/2014

Yes

3/7/2014

3.00

Each

\$145.00

Manufacture as per drawing D4920 rev.A  
Made from 17-4SS H900 Round Bar 1.375"  
B112020

Line Total:

20 D4920-3P

End Fitting

3/7/2014

Yes

3/7/2014

3.00

Each

\$145.00

Manufacture as per drawing D4920 rev.A  
Made from 17-4SS H900 Round Bar 1.375"  
B112021

Line Total:

PO Total:

\$10.2

PO Instructions: Procurement Quality Clauses

A004 FAA-PMA /TSO

A005 RIGHT OF ENTRY

A008 FIRST ARTICLE INSPECTION (FAI) BY SELLER, (DOCUMENTATION SENT TO DART AEROSPACE)

A016 PERSONNEL QUALIFICATION

A024 PROCESS CERTIFICATIONS

A025 CERTIFICATE OF CONFORMANCE

A040 NOTIFICATION OF QUALITY ESCAPE

A041 QUALITY MANAGEMENT SYSTEM

*M. Gregoire*

# First Article Inspection Report



731 Industrielle St  
Rockland, Ontario K4K 1T2  
Ph: 613 446-4544

Customer: **Dart Aerospace**

Date: **March 22nd, 2014**

**469**

Part Number: **D4920-3P**

Revision: **A**

PO Number: **PO22838**

Qty: **3**

FAI No.

Item	Dimension	Measurement	Remarks
		Inspected by: Rene Tougas, Q.C.	
1	3.04	3.045	Section F-F
2	2.157±.005	2.160	
3	.40	.401	
4	.500	.501	
5	.38 REF	.384	
6	.030	.029	
7	.295	.297	
8	.017	.016	
9	3.23	3.228	
10	Ø.820	.825	
11	R.43	.43	
12	.500	.501	
13	.090	.089	
14	.35	.351	
15	.090	.086	
16	.410	.410	
17	R.50	.50	
18	Ø.047	.049	2 Places
19	R.06	.032	
20	112.1°	112.0°	
21	.11	.115	Auxiliary View I-I
22	Note 6	✓	
23	Ø.250/.249	.250	View J-J
24	Ø1.00	1.002	
25	Ø.420+.000/-.001	.4197	
26	1.36	1.360	
27	R.031	.030	
28	.295 REF	.297	
29	30°	30°	Section G-G
30	Ø.125	.126	





**ATG**  
INDUSTRIES INC

[illegible]





# skyservice Work Order Traveler

Sky Service F.B.O. Inc.

Page: 1 of 1


DOT APP 53-89 / EASA 145.7142 / BDA-AMO 385

WO #: MWO20030	Customer: Cash Sale	Dept: NDT YUL	Reference: PO 20509
Descr:	PN: DART AEROSPACE	S/N: DAS	Qty: 1
Make:	Model:	Reg: 27	A/C S/N:
TSN: 0	CSN: 0	TSO: 0	9-89
Task:			Sequence: 0

## Work Required:


CARRY OUT NDT ON THE FOLLOWING ITEMS:

- 1) ITEM ID: D4920-1 WORK ORDER ID 112020 QTY 2
- 2) ITEM ID: D4920-3 WORK ORDER ID 112021 QTY 3
- 3) ITEM ID: D412-664-203 W.O. ID 114223
- 4) ITEM ID: D412-664-203 W.O. ID 114827
- 5) ITEM ID: D412-664-203 W.O. ID 114826

Action Taken:	Date:	Initial/Stamp:
LIQUID PENETRANT INSPECTION BACK UP BY EDDY CURRENT INSPECTION CARRIED OUT ON ITEMS LISTED ABOVE.	25 MAR 14	
No CRACKS FOUND		

Description	Location	P/N	Qty	Batch	S/N Off	S/N On
LPI = ARDROX 970P25E				BATCH # TP010484		
BLACK LIGHT = M20189						
EDDY CURRENT = NORTEL 500 S				S/N T-20656	CAL DUE 30 JAN 15	

I certified that the maintenance described above has been performed in accordance with the applicable standard of airworthiness.

Signature:	ACA/SCA Stamp	Date:
Name: GARY SMITH		25 MAR 2014



Dart Aerospace Ltd.  
1270 Aberdeen Street  
Hawkesbury, ON K6A 1K7  
Tel: 613 632 9577  
Fax: 613 632 1053

## PURCHASE ORDER

Purchase Order ID PO23509

Purchase Order Date 3/25/2014

PO Print Date 3/25/2014

Page Number 1 of 3

Order From :  
SKYSERVICE  
6120 MIDFIELD ROAD  
MISSISSAUGA, ONTARIO L5P 1B1  
CANADA

VC-SKY001

Ship To : DART AEROSPACE LTD  
1270 ABERDEEN  
HAWKESBURY, ON K6A 1K7  
CANADA

Contact Name  
Vendor Phone 905-678-5636

Ship To Contact  
Ship To Phone  
Ship Via: Delivered  
Ship Acct:

Buyer  
Customer POID  
Customer Tax # 10127-2607  
Terms Net 30  
Currency CAD  
FOB FCA - (Free Carrier)

Line Nbr	Reference Vendor Part Number Line Comments Delivery Comments	Description/ Mfg ID	Req Date/ Taxable Promise Date	CD	Req Qty/ Unit of Measure	PO Unit Price	Extended Price
1	112020	D4920-1 END FITTING	3/25/2014 Yes 3/25/2014		2.00	\$94.50	\$189.00
LIQUID PENETRANT INSPECTION AS PER QSI 038 OR LPI AS PER ASTM 1417 LEVEL 2							
Line Total:							\$189.00
2	112021	D4920-3 END FITTING	3/25/2014 Yes 3/25/2014		3.00	\$63.00	\$189.00
LIQUID PENETRANT INSPECTION AS PER QSI 038 OR LPI AS PER ASTM 1417 LEVEL 2							
Line Total:							\$189.00

CY14103125

Note:

3/25/2014